

IN THE CLAIMS

Sub
CU
1. (Currently Amended) A data charging system for charging for the use of object data, the system comprising:

a content generator for generating contents containing object data,

a recording medium for recording charging data used for charging for said object data and recognition data used for ~~recognition of~~ identifying the object data, and

a data charging apparatus for charging for the use of said object data by using said charging data and said recognition data which have been recorded;

wherein said data charging apparatus comprises:

data reading logic for reading out said recognition data and said charging data from said recording medium,

a separator for separating said object data from said contents,

a recognition logic for recognizing said separated object data by using said recognition data which has been read out from the recording medium,

an accounting logic for dynamically charging for the use of said recognized object data by using said charging data which has been read out from the recording medium, and

a writing logic for writing, as said charging data, the results of charging for the use of said recognized object data into said recording medium.

2. (Currently Amended) A content generator for embedding digital watermarks in object data and generating contents in a data charging system which records, on a recording medium, charging data used for charging for object data contained in said contents and

recognition data used for ~~recognizing~~ identifying the object data and dynamically charges only for the use of the object data embedded with said digital watermarks by using said charging data and said recognition data which have been recorded in said recording medium.

3. (Currently Amended) In a data charging system which records, on a recording medium, charging data used for charging for object data contained in contents and recognition data used for ~~recognizing~~ identifying the object data and charges for the use of said object data by using said charging data and said recognition data which has been recorded in the recording medium,

a data charging apparatus comprising:

a data reading logic for reading said recognition data and said charging data from said recording medium,

a separator for separating said object data from said contents,

a recognition logic for recognizing said separated object data by using said recognition data read out from the recording medium,

an accounting logic for dynamically charging for the use of said recognized object data by using said charging data which has been read out from the recording medium, and

a writing logic for writing, as said charging data, the results of charging for the use of said recognized object data into said recording medium.

4. (Previously Amended) The data charging apparatus according to Claim 3, wherein said contents comprise said object data and said recognition data for recognizing this object data,

said separator separates said object data and said recognition data from said contents,

said recognition logic recognizes said object data, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from said recording medium, and

said accounting logic charges for said object data by using said charging data which has been read out.

5. (Previously Amended) The data charging apparatus according to Claim 3, further comprising a watermarking logic for embedding digital watermarks in said object data which has been separated from said contents, wherein said separator separates said object data and said recognition data from said contents,

said recognition logic recognizes said object data, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from said recording medium, and

said accounting logic charges for said object data embedded with said digital watermarks.

6. (Previously Amended) The data charging apparatus according to Claim 3, wherein a digital watermark is embedded in said object data in said contents,

said data charging apparatus further comprising a means for detecting if said object data is embedded with said digital watermark,

said separator separating said object data and said recognition data from said contents,

said recognition logic recognizing said object data, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from said recording medium, and

said accounting logic charging for said object data only if said object data is found to be embedded with said digital watermark.

7. (Previously Amended) The data charging apparatus according to Claim 3, wherein said charging data recorded on said recording medium contains at least payment data which indicates payment made in advance for the use of said object data, and

said accounting logic charges for the use of said object data within limits of an amount indicated by said payment data contained in said charging data.

8. (Previously Amended) The data charging apparatus according to Claim 7, wherein said charging data recorded on said recording medium further contains unit price data representing an accounting unit for the use of said object data and a price corresponding to the accounting unit,

said data charging apparatus comprising an accounting unit detection logic for detecting unit accounting amount data which represents an amount of said accounting unit for the object data which has been separated from said contents,

said accounting logic charging within the limits of the amount indicated by said payment data, based on said unit price data contained in said charging data which has been read out and on the unit accounting amount data which has been detected.

Claim 9 (Cancelled).

10. (Currently Amended) A data charging method for generating contents which contain object data and recognition data used for the ~~recognition of~~ identifying this object data, recording in a recording medium, charging data used for charging for said object data and the recognition data used for ~~recognition of~~ identifying the object data, and charging for the use of said object data by using said charging data and said recognition data which have been recorded, comprising the steps of:

reading said recognition data and said charging data from said recording medium,

separating said object data from said contents,

recognizing said separated object data by using said recognition data which has been read out from the recording medium,

dynamically charging for the use of said recognized object data by using said charging data which has been read out from the recording medium; and

writing, as said charging data, the results of charging for the use of said recognized object data into said recording medium.

11. (Previously Amended) A data charging method according to Claim 10, wherein said object data in said contents are embedded with digital watermarks, comprising the steps of:

separating said object data and said recognition data from said contents;

recognizing said object data, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from said recording medium;

detecting said digital watermark embedded in said object data; and

charging for said recognized object data only by using said charging data which has been read out if said object data is found to be embedded with said digital watermark.

12. (Previously Amended) A data charging method according to Claim 10, comprising the steps of:


separating said object data and said recognition data from said contents;

recognizing said object data, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from said recording medium;

embedding digital watermarks in said separated object data; and

charging for the use of the object data embedded with said digital watermarks by using said charging data which has been read out.

13. (Currently Amended) In a data charging apparatus of a data charging system which records, on a recording medium, charging data used for charging for object data contained in contents and recognition data used for ~~recognition of~~ identifying the object data, and charges for the use of said object data by using said charging data and said recognition data which have been recorded;

 a computer program product enabling a computer to execute the steps of:
reading said recognition data and said charging data from the recording medium,
separating said object data from said contents,
recognizing said separated object data by using said recognition data which has been read out from the recording medium,
dynamically charging for the use of said recognized object data by using said charging data which has been read out from the recording medium, and
writing, as said charging data, the results of charging for the use of said recognized object data into said recording medium.

14. (Previously Amended) The computer program product according to Claim 13, wherein said contents contain said object data and said recognition data used for recognition of the object data,
said object data and said recognition data are separated from said contents in said separation step,

said object data is recognized in said recognition step, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from the recording medium, and

a charge is made for said object data in said charging step by using said charging data which has been read out.

15. (Previously Amended) The computer program product according to Claim 13, wherein the computer is made to execute the step of embedding digital watermarks in said object data which has been separated from said contents,

said object data and said recognition data are separated from said contents in said separation step,

said object data is recognized in said recognition step, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from the recording medium, and

a charge is made for said object data embedded with said digital watermarks in said charging step.


16. (Previously Amended) The computer program product according to Claim 13, wherein said object data in said contents are embedded with digital watermarks,

the computer is further made to execute the step of detecting that said object data is embedded with said digital watermarks,

said object data and said recognition data are separated from said contents in said separation step,

said object data is recognized in said recognition step, based on said recognition data which has been separated from said contents and on said recognition data which has been read out from the recording medium, and

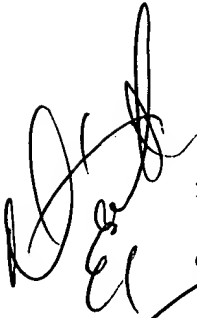
a charge is made for said object data in said charging step only if said object data is found to be embedded with said digital watermark.

 Claims 17-19 (Cancelled).

20. (Previously Added) A data charging system according to Claim 1, wherein the content generator generates a digital watermark embedded in said contents.

21. (Previously Added) A data charging system according to Claim 20, wherein the content generator generates watermark information about the digital watermark and also embedded in said contents.

22. (Previously Added) A method according to Claim 11, further comprising the step of embedding in said contents information about the digital watermarks.



23. (Previously Added) A method according to Claim 22, wherein the embedding step includes the step of embedding in said contents instructions for embedding the contents with said digital watermarks.
